

**Technology and Equipment
Committee Meeting**

August 29, 2007

**MRI
MATERIAL**

Material Related to

MRI Petition – 3: Greensboro Orthopaedics, P.A.



PETITION FOR AN ADJUSTED NEED DETERMINATION FOR ONE FIXED MRI SCANNER FOR GUILFORD COUNTY

Petitioner:

Greensboro Orthopaedics, P.A.
1401 Benjamin Parkway
Greensboro, NC 27408-4518

John S. Nosek, MPA, CMPE
Executive Director
336-545-5000

DEPT. OF HEALTH SERVICES
RECEIVED

MEDICAL FACILITIES
PLANNING SECTION

To:

Medical Facilities Planning Section
Division of Health Service Regulation
2714 Mail Service Center
Raleigh, NC 27699-2714

Requested Change:

Greensboro Orthopaedics, P.A. (GOC) seeks an adjusted MRI need determination, specifically to include one fixed MRI scanner in Guilford County in the 2008 State Medical Facilities Plan (SMFP).

There are a number of reasons that justify an adjusted need determination

- The MRI utilization in Guilford County is well above the State's average use rate.
- Guilford County has an unreasonably low ratio of fixed MRI scanners to population compared to other similar counties.
- Guilford County had the second highest mobile utilization in FY 2006 of all North Carolina counties, and its proportion of mobile MRI scans to total MRI scans is increasing.
- Of the 12 counties with fixed MRI need determinations in the Proposed 2008 SMI P, nine have a lower population to fixed MRI ratio than does Guilford County.
- The percentage of Guilford County residents who obtain MRI scans in other counties has been steadily increasing the past three years.
- Because of the high level of mobile MRI utilization in Guilford County, the lack of a need determination for an additional fixed MRI scanner in Guilford County has negative cost implications for patients and providers, thus adversely effects this population.
- Mobile MRI services are not the most effective option from an operational or patient perspective.

Approval of this petition will enable any eligible applicant the opportunity to submit competitive Certificate of Need applications proposing the best plan for addition of a fixed MRI scanner in Guilford County.

The detailed rationale is described below:

Mobile MRI Utilization

Currently, Guilford County has four providers that are exclusively mobile sites: Greensboro Orthopaedics, Guilford Neurosurgical, High Point Orthopaedics and Southeastern Orthopaedic Specialists. In FY 2006, these four providers performed 11,988 mobile MRI procedures. In addition, three other mobile MRI host sites performed an additional 5,685 mobile MRI procedures, for a total of 17,673 mobile MRI procedures performed in Guilford County. This is the second highest utilization of mobile MRI services in North Carolina, behind only Mecklenburg County, which has a population nearly twice as large as that of Guilford County. The table below provides mobile MRI utilization for the ten counties with the highest mobile MRI utilization in FY 2006:

**FY2006 Mobile MRI Utilization
Top 10 Counties**

County	Mobile
MECKLENBURG	20,118
GUILFORD	17,673
WAKE	10,645
NEW HANOVER	10,362
FORSYTH	7,356
MOORE	6,664
CATAWBA	6,592
GASTON	4,203
ONSLOW	3,659
RUTHERFORD	3,360

Source: Proposed 2008 SMFP

The FY2006 data is not an anomaly. For the past three years, mobile utilization in Guilford County has steadily increased. In fact, mobile utilization in Guilford County triggered a need for a fixed MRI scanner in the 2001, 2002, 2003 and 2005 SMFP. The following table provides historical mobile MRI utilization for Guilford County.

**Guilford County Historical Mobile MRI Utilization
FY2000-FY2006**

Year	Mobile Utilization	% Increase
2000	6,217	--
2001	8,905	43.2%
2002	11,058	24.2%
2003	13,194	19.3%
2004	14,680	11.3%
2005	15,307	4.3%
2006	17,673	15.5%

Source: 2002-2007 SMFP, Proposed 2008 SMFP

As shown in the previous table, mobile MRI utilization in Guilford County experienced an average annual increase of over 184% from 2000 to 2006. This is a direct indication of the need for increased access to fixed MRI services. Clearly, special circumstances exist in Guilford County with regard to utilization of mobile MRI services that necessitate the need for additional fixed MRI access. GOC believes an adjusted need determination for one additional fixed MRI scanner in Guilford County will provide much needed local services that will be highly utilized.

Fixed MRI Scanners in Guilford County

In addition to having high utilization of MRI services, demographic data also demonstrates a clear need for increased access to fixed MRI services in Guilford County.

Currently, there are ten operational MRI scanners in Guilford County. This is disproportionate to the growing population in Guilford County. Comparatively, of the seven most populous counties in North Carolina, Guilford County has the second worst ratio of fixed MRI scanners to population. Please refer to the table below.

**Fixed MRI Scanner to Population Ratio
Most Populous North Carolina Counties**

County	2006 Population	2011 Population	% Change	Total Fixed Magnets	Magnet to Population Ratio
Wake	789,969	933,711	18.2%	11	71,815
Guilford	449,071	481,855	7.3%	10	44,907
Cumberland	306,545	314,202	2.5%	7	43,792
Mecklenburg	826,897	952,975	15.2%	19	43,521
Forsyth	331,851	356,188	7.3%	14	23,704
Buncombe	221,327	238,214	7.6%	10	22,133
Durham	246,825	266,860	8.1%	12	20,569

Source: Proposed 2008 SMFP, NC State Demographics (2006)

Forsyth County (which is adjacent to Guilford County) has a far more favorable ratio of fixed MRI scanners to population. Notably, however, in 2006 Guilford County had a population 36% higher than that of Forsyth County. Also, Buncombe County, which has a population less than half that of Guilford County, has the same number of fixed MRI scanners (10) as Guilford County. Both of these examples are inconsistent with the principle of equitable access to healthcare services in North Carolina.

As the population continues to increase and the medical community continues to grow, there is no indication that the trending increase of MRI services in Guilford County will change in the near future.

Guilford County MRI Use Rate

Improved MRI technology and capabilities have enhanced the clinical diagnostic approaches to many illnesses and disease states. As a result, MRI is often the imaging modality of choice for an increasing number of conditions that local physicians seek to diagnose each day. As a result, MRI utilization rates have greatly increased. The North Carolina MRI utilization rate was 88.7 procedures per 1,000 population in 2006. In the last five years (2001-2006) the North Carolina MRI use rate increased by 30%.

MRI utilization rates for individual counties in North Carolina are trending upward as well. Residents of Guilford County and their physicians recognize the valuable benefits of MRI services. As a result, MRI services are highly utilized in Guilford County. The Proposed 2008 SMFP shows Guilford County as having a higher MRI use rate compared to the North Carolina average.

2006 MRI Use Rate per 1,000 Population

	MRI Procedures	Population	MRI Use Rate
Guilford County	52,235	449,071	116.3
North Carolina	786,150	8,860,341	88.7

Source: Proposed 2008 SMFP, NC State Demographics (<http://demog.state.nc.us/>) updated 2006.

As shown above, Guilford County provides MRI services over 31% above the State average. In fact, Guilford County has the 14th highest MRI use rate per 1,000 population of the 100 counties in North Carolina. Please refer to the table below.

2006 MRI Use Rates by County

County	# of Procedures			2006 Population	MRI Use Rate
	Fixed	Mobile	Total		
MOORE	12,704	6,664	19,368	82,288	235.4
ORANGE	25,610	--	25,610	123,762	206.9
FORSYTH	60,024	7,356	67,380	331,851	203.0
BUNCOMBE	40,405	156	40,561	221,327	183.3
DURHAM	43,735	1,290	45,025	246,825	182.4
PITT	24,554	843	25,397	146,398	173.5
HERTFORD	2,036	2,018	4,054	23,901	169.6
CHOWAN	--	2,438	2,438	14,677	166.1
CABARRUS	24,910	575	25,485	157,176	162.1
NEW HANOVER	16,292	10,362	26,654	184,116	144.8
CATAWBA	13,910	6,592	20,502	151,126	135.7
CRAVEN	12,181		12,181	95,566	127.5
IREDELL	16,850	308	17,158	145,232	118.1
GUILFORD	34,562	17,673	52,235	449,071	116.3

Source: Proposed 2008 SMF P, NC State Demographics (<http://demog.state.nc.us/>) updated 2006

Below is a table showing the North Carolina counties that had the most MRI scans during FY 2006. As shown, Guilford County hosted the 4th largest number of MRI scans of all 100 North Carolina counties.

Highest Volume MRI Counties in North Carolina

County	Fixed	Mobile	Total
MECKLENBURG	68,428	20,118	88,546
FORSYTH	60,024	7,356	67,380
WAKE	45,047	10,645	55,692
GUILFORD	34,562	17,673	52,235
DURHAM	43,735	1,290	45,025
BUNCOMBE	40,405	156	40,561
CUMBERLAND	28,410	383	28,793
NEW HANOVER	16,292	10,362	26,654
ORANGE	25,610	0	25,610
CABARRUS	24,910	575	25,485
PIGT	24,554	843	25,397

Sources: 2008 SMFP

This is a clear indication that MRI is an important and highly utilized service for Guilford County.

In addition to being North Carolina's 3rd most populous county, Guilford County is also one of the State's primary health care centers. Guilford County hosts large medical centers, and is home to a large number of physicians and other provider professionals (such as Greensboro Orthopaedics), representing practically every medical specialty and sub-specialty. These providers serve not only residents of Guilford County, but also residents of neighboring counties and residents from throughout North Carolina and adjacent states. As a result, it is important that the county's resources have the capacity to accommodate this current and growing demand.

Further, of the 12 North Carolina counties for which the Proposed 2008 SMFP indicates a need determination for an additional fixed MRI scanner, nine counties have at least one fixed MRI scanner, and of these, six have a lower population to fixed MRI scanner ratio than does Guilford County. Please see the table below.

Proposed 2008 SMFP MRI Need Determination Counties

County	2006 Population	2011 Population	% Change	Total Fixed Magnets	Magnet to Population Ratio	Need Determination
Orange	123,762	131,195	6.0	7	17,680	1
Forsyth	331,851	356,188	7.3	14	23,704	1
Craven	95,566	99,884	4.5	3	31,855	1
Jackson	36,312	38,478	6.0%	1	36,312	1
Surry	73,000	75,230	3.1%	2	36,500	1
Vance	43,925	45,204	2.9%	1	43,925	1
Guilford	449,071	481,855	7.3%	10	44,907	0
Lenoir	58,170	57,910	-0.4%	1	58,170	1
Carteret	63,557	66,856	5.2%	1	63,557	1
Wilkes	66,924	68,130	1.8%	1	66,924	1

Source: Proposed 2008 SMFP, NC State Demographics (<http://demog.state.nc.us/>) updated 2006

In addition, the percentage of Guilford County residents who obtain MRI scans in other counties has been steadily increasing the past three years. As shown on the table below during FY2006 over 13% of Guilford County residents had to obtain an MRI scan outside the county. This represents a 45% increase from FY2003.

Out-of-county MRI Scans Guilford County Residents FY2003 - FY2005

Year	% of Total Scans
2003	9.1%
2004	9.7
2005	13.1%
2006	13.2

Source: MRI Patient Origin Data, Medical Facilities Planning Section

These data are a strong indication of the limited access to MRI services within Guilford County. In order to provide quality and timely care, it is essential that Guilford County

have an inventory of fixed MRI scanners that is proportionate to the population seeking such services.

No Unnecessary Duplication of Services

Greensboro Orthopaedics has established that Guilford County currently has an unreasonably low ratio of fixed MRI scanners to population compared to other similar counties. This petition also contains evidence that a growing percentage of the MRI scans performed on Guilford County residents are obtained in another county. This provides further evidence that an additional fixed MRI scanner is needed in Guilford County. Also, members of the medical communities in Guilford County indicate that an additional fixed MRI scanner in the local community will increase access, alleviate capacity constraints on existing providers, and will better serve the community's MRI needs. Clearly, therefore, addition of another fixed MRI scanner in Guilford County is not unnecessary duplication. Similarly, Guilford County had the second highest mobile utilization in FY2006 of all North Carolina counties. This is a direct indication of the need for increased access to fixed MRI services.

Adverse Effects of No Adjustment to the Need Determination

Should this petition not be granted, Guilford County would have to continue with the status quo. The existing fixed and mobile providers would continue providing the existing MRI services with their present inadequate capacity. However, given the steady increase of MRI utilization in Guilford County, this is not a viable alternative. The table below provides historical MRI utilization in Guilford County.

**Guilford County Historical MRI Utilization
FY2001-FY2006**

	MRI Procedures	% Increase
2001	40,489	21.1
2002	42,251	4.4
2003	46,244	9.5
2004	50,912	10.1

2005	53,569	5.2%
2006	52,235	-2.5%

Source: 2003 – 2007 SMFP, Proposed 2008 SMFP

In the past five years, Guilford County has experienced a total increase in MRI procedures of over 29%. As previously stated in this petition, the mobile MRI utilization has increased much faster, 184%, during the same five-year period. As a result, the proportion of mobile MRI scans performed in Guilford County has risen from 18% of total MRI scans in 2001, to nearly 34% of total MRI scans in 2006. Please see the table below.

Guilford County Mobile MRI Utilization Ratio

	Mobile Utilization	Total Utilization	% Mobile of Total
2000	6,217	33,428	18.6%
2001	8,905	40,489	22.0%
2002	11,058	42,251	26.2%
2003	13,194	46,244	28.5%
2004	14,680	50,912	28.8%
2005	15,307	53,569	28.6%
2006	17,673	52,235	33.8%

Source: 2003 – 2007 SMFP, Proposed 2008 SMFP

As previously discussed, the ratio of fixed MRI providers to population is already less favorable than comparative and surrounding counties, and Guilford County currently has the second largest mobile MRI volume in the State. These factors combined make the status quo unacceptable from a planning and patient access perspective.

Since 1997, Greensboro Orthopaedics has provided mobile MRI services in Guilford County. Currently, a mobile MRI scanner is on site and operational five days each week. While Greensboro Orthopaedics values the services a mobile MRI scanner provides to the community, it is not the most effective option from an operational, patient, or cost perspective. First, reliability is not equivalent to that of fixed scanners. Each year, GOC experiences several days when its mobile MRI scanner is down due to

factors associated with travel of the mobile unit. This results in an unnecessary delay of patient access to MRI services. Second, physical access to mobile service is less than ideal, because mobile MRI scanners are physically located outside a facility on a concrete pad. Access to mobile MRI scanners can be especially problematic in inclement weather, or during days of extreme hot or cold temperatures. This creates an unnecessary burden for patients, especially the elderly or patients already in pain.

Existing providers of mobile MRI services in Guilford are reaching practical operating capacity. For example, Greensboro Orthopaedics' mobile MRI utilization, although the highest in the county, has been relatively flat for the last two years, compared to the growth in previous years.

**Greensboro Orthopaedics, P.A.
Mobile MRI Utilization
FY2001-FY2006**

Year	MRI Scans	% Increase
FY2001	2,646	--
FY2002	4,238	60.2
FY2003	4,582	8.1
FY2004	5,128	11.9
FY2005	5,288	3.1
FY2006	5,526	4.5

Source: 2005-2007 SMFPs, Proposed 2008 SMFP

This is due to the high utilization of mobile MRI services at Greensboro Orthopaedics, and the lack of additional capacity. As stated previously, GOC has operational access to a mobile MRI scanner five days each week. Due to the current utilization of its existing mobile MRI services and the amount downtime experienced each year, GOC is not able to accommodate the demand for its MRI services. GOC's experience is not unusual, as mobile MRI capacity is limited throughout the State.

Finally, there are negative cost implications associated with maintaining the status quo in Guilford County. As described previously, Guilford County performed the greatest number of mobile MRI procedures in North Carolina in 2006 (17,673 mobile MRI procedures). Hospitals and freestanding facilities that host mobile MRI scanners experience higher costs due to the fee that must be paid to the mobile provider for each

MRI scan. Unfortunately, these higher costs are often transmitted to the patients. As a current provider of mobile MRI services, GOC estimates that, on average in Guilford County, approximately \$300 per scan is paid to the mobile MRI provider. Thus, in FY2006, this equates to approximately \$5,302,000 in fees that were paid to mobile providers in Guilford County. These costs are passed along to consumers.

Mobile MRI scanners provide a valuable service to Guilford County, however, it is not the most cost effective alternative for patients. If an adjusted need determination is not granted for Guilford County, patients and providers will continue to experience increased charges and costs, respectively.

Conclusion:

In summary, Greensboro Orthopaedics, P.A. seeks an adjusted need determination to include one fixed MRI scanner in Guilford County in the 2008 SMIIP, based on the following reasons:

- The MRI utilization in Guilford County is well above the State's average use rate.
- Guilford County has an unreasonably low ratio of fixed MRI scanners to population compared to other similar counties.
- Guilford County had the second highest mobile utilization in FY2006 of all North Carolina counties, and its proportion of mobile MRI scans to total MRI scans is increasing.
- Of the 12 counties with fixed MRI need determinations in the proposed 2008 SMIIP, nine have a lower population to fixed MRI ratio than does Guilford County.
- The percentage of Guilford County residents who obtain MRI scans in other counties has been steadily increasing the past three years.
- Because of the high level of mobile MRI utilization in Guilford County, the lack of a need determination for an additional fixed MRI scanner in Guilford County has negative cost implications for patients and providers, thus adversely effects this population.
- Mobile MRI services are not the most effective option from an operational or patient perspective.

We feel there is a clear need for an additional fixed MRI scanner in Guilford County. We hope you will support us in this effort by approving this petition for an adjusted

need determination. Thank you for providing us with the opportunity to present this important community issue.

**Technology and Equipment
Committee Meeting**

August 29, 2007

**MRI
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Material Related to

MRI Comments – 3: Greensboro Orthopaedics, P.A.



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MEDICAL FACILITIES
PLANNING SECTION

**SHCC Public Hearing Presentation Comments for
Adjusted Need Determination for Fixed MRI Scanners in Guilford County
July 20, 2007**

Good afternoon, my name is David Meyer. I am a consultant to Greensboro Orthopaedics. I am here today to speak on behalf of their petition for an adjusted need determination for one fixed MRI scanner in Guilford County to be included in the 2008 State Medical Facilities Plan.

Approval of this petition will enable any eligible applicant the opportunity to submit competitive Certificate of Need applications proposing the best plan for addition of a fixed MRI scanner in Guilford County.

There are a number of reasons that justify an adjusted need determination in Guilford County:

Historically, mobile MRI utilization has played an important role in determining need for fixed MRI scanners in Guilford County. Mobile utilization in Guilford County triggered a need for a fixed MRI scanner in the 2001, 2002, 2003 and 2005 SMFPs.

Currently, Guilford County has four MRI providers that are exclusively mobile sites. In FY2006, these four providers performed 11,988 mobile MRI procedures. In addition, three other mobile MRI host sites performed an additional 5,685 mobile MRI procedures. This is the second highest utilization of mobile MRI services of any county in the State. The scans performed at these sites are indicative of a greater need for at least another fixed MRI scanner based in Guilford County. Clearly, special circumstances exist in Guilford County with regard to utilization of mobile MRI services that necessitate the need for additional fixed MRI access.

Second, Guilford County has an unreasonably low ratio of fixed MRI scanners to population compared to other similar counties. Specifically, of the seven most populous counties in North Carolina (counties with populations exceeding

days when its mobile MRI scanner is down due to factors associated with travel of the mobile unit. This results in an unnecessary delay of patient access to MRI services. Additionally, physical access to mobile service is less than ideal, because mobile MRI scanners are physically located outside a facility on a concrete pad. Physical access to mobile MRI scanners can be especially problematic in inclement weather, or during days of extreme hot or cold temperatures. This creates an unnecessary burden for patients, especially the elderly or patients already in pain.

In summary, Greensboro Orthopaedics seeks an adjusted need determination to include one fixed MRI scanner in Guilford County in the 2008 SMFP, based on the following reasons:

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- Because of the high level of mobile MRI utilization in Guilford County, the lack of a need determination for an additional fixed MRI scanner in Guilford County has negative cost implications for patients and providers, thus adversely effects this population.
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We feel there is a clear need for an additional fixed MRI scanner in Guilford County. We hope you will support us in this effort by approving this petition for an adjusted need determination. Thank you for providing us with the opportunity to discuss this important issue.
